

From Used Cooking Oil to Biodiesel Fuel

Navy CRADA Leads to Mini Refinery

More than 100 people attended the ribbon cutting ceremony at Naval Base Ventura County for the Navy's first mini refinery that converts used restaurant oil into biodiesel fuel.

"If successful, mini-refineries could begin popping up on Navy bases across the country to help the military meet tougher smog rules," said Kurt Buehler, project engineer at the Naval Facilities Engineering Service Center (NFESC) in Port Hueneme, CA. Buehler presided over the 30 October 2003 dedication of the biodiesel refinery—the first ever to be located at a U.S. military installation.

generated by restaurants on Naval Base Ventura County, NFESC and Biodiesel Industries, Inc. expect to demonstrate that the military can easily convert this used cooking oil into cleaner burning biodiesel fuel. Normally, the used cooking oil is a solid waste that has to be disposed of.

Port Hueneme engineers plan to produce the alternative fuel in 200-gallon batches. In the first year, they will test about 60,000 gallons on base vehicles, and distribute 20,000 more each to the National Park Service and Ventura County's local government.

The agencies will test the product on government fleets and report back to NFESC with their results. While actual production will be relatively minimal, the study is expected to demonstrate that a small refinery could produce up to one million gallons of biodiesel per year.

By collecting used cooking oil generated by restaurants on Naval Base Ventura County, NFESC expects to demonstrate that the military can easily convert this oil into cleaner burning biodiesel fuel.

The biodiesel demonstration validation effort is being executed under a Cooperative Research and Development Agreement (CRADA) between NFESC and Biodiesel Industries, Inc. The demonstration validation effort is sponsored and approved by the Chief of Naval Operations, Environmental Readiness Division (N45) via the Pollution Prevention Equipment Program (PPEP). Buehler was also requested to present the effort to H.T. Johnson, then-Acting Secretary of the Navy. His presentation was well received.

Joe Jobe, executive director of the National Biodiesel Board, called the pilot project a groundbreaking event. Jobe, who flew in from the board's Missouri headquarters for the event, said it was appropriate that the refinery was at a California military base. California is the nation's largest agricultural producer and could lead the way in planting crops, such as rapeseed or soybeans that produce oils for biodiesel.

The "mini refinery" itself could fit into the back of a pickup truck and looks like one of those microbreweries popping up in trendy pubs across the country. But the Navy has big plans for its little refinery. Collecting used cooking oil

Several dignitaries attended the ribbon-cutting event, including three Ventura County supervisors; Assemblywoman Fran Pavley; Naval Base Ventura County Commanding Officer Capt. Paul S. Grossgold, and Capt. William J. Beary, who heads the Naval Facilities Engineering Service Center. [⚓](#)

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